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September 30, 2019

Via Electronic Filing

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

RE: South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Carolinas, LLC's Standard Offer, Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) - S.C. Code Ann. Section 58-41-20(A)
Docket No. 2019-185-E

South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Progress, LLC's Standard Offer, Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) - S.C. Code Ann. Section 58-41-20(A)
Docket No. 2019-186-E

Dear Ms. Boyd:

Please find attached for electronic filing the *Prehearing Brief* filed on behalf of the South Carolina Coastal Conservation League (CCL) and Southern Alliance for Clean Energy (SACE) in the above-referenced matter.

Please contact me if you have any questions concerning this filing.

Sincerely,
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CERTIFICATE OF SERVICE

I hereby certify that the parties listed below have been served via electronic mail with a copy of the *Prehearing Brief* filed on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy.

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This 30th day of September, 2019.

s/ Lauren Fry
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BEFORE THE PUBLIC SERVICE

COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2019-185-E

DOCKET NO. 2019-186-E

In the Matter of: South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Carolinas, LLC's Standard Offer, Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) - S.C. Code Ann. Section 58-41-20(A), and South Carolina Energy Freedom Act (H.3659) Proceeding to Establish Duke Energy Progress, LLC's Standard Offer, Avoided Cost Methodologies, Form Contract Power Purchase Agreements, Commitment to Sell Forms, and Any Other Terms or Conditions Necessary (Includes Small Power Producers as Defined in 16 United States Code 796, as Amended) - S.C. Code Ann. Section 58-41-20(A)	**PREHEARING BRIEF OF THE SOUTHERN ALLIANCE FOR CLEAN ENERGY AND SOUTH CAROLINA COASTAL CONSERVATION LEAGUE**

Pursuant to South Carolina Public Service Commission ("Commission") Order No. 2019-107-H, Docket Nos. 2019-185-E and 2019-186-E, the South Carolina Coastal Conservation League ("CCL") and the Southern Alliance for Clean Energy ("SACE") (collectively, the "Conservation Groups"), through counsel, file this prehearing brief on certain issues in the current proceeding, which concerns the avoided cost rates for Duke Energy Progress ("DEP") and Duke Energy Carolinas ("DEC") (collectively "Duke Energy" or "the Companies"). Conservation Groups recognize that intervenors have raised many issues regarding DESC's filings.[1] This brief focuses on key deficiencies in Duke Energy's proposed avoided capacity rates and proposed Solar Integration Services Charge ("SISC") that the Conservation Groups have raised through the expert testimony and reports of James Wilson and Brendan Kirby respectively. The Conservation Groups respectfully submit this brief opposing Duke Energy's proposed avoided capacity rates and SISC, and requesting that the Commission reject these proposals as unsupported and inappropriate at this time.

I. Statement of the case

On May 16, 2019, the Governor of South Carolina signed into law Act 62, 2019-2020 Gen. Assemb., 123rd Sess. (S.C. 2019) ("Act 62" or the "EFA"), which directs the Commission

> to address all renewable energy issues in a fair and balanced manner, ***considering the costs and benefits to all customers of all programs and tariffs that relate to renewable energy and energy storage, both as part of the utility's power system and as direct investments by customers for their own energy needs and renewable goals***. The commission also is

[1] Conservation Groups appreciate the opportunity to file responsive briefs on Oct. 8, 2019 and reserve the right to respond to issues raised by the other parties at that time.

> directed to ensure that the revenue recovery, cost allocation, and rate design of utilities that it regulates are ***just and reasonable and properly reflect changes in the industry as a whole***, the benefits of customer renewable energy, energy efficiency, and demand response, as well as any utility or state-specific impacts unique to South Carolina which are brought about by the consequences of this act.

S.C. Code Ann. § 48-51-05 (emphasis added). Act 62 requires Commission decisions in avoided cost dockets to be "just and reasonable to the ratepayers of the electrical utility, in the public interest, consistent with PURPA, and the Federal Energy Regulatory Commission's implementing regulations and orders, and nondiscriminatory to small power producers; and shall strive to reduce the risk placed on the using and consuming public."[2]

Specifically regarding the integration of renewable energy, a separate provision of Act 62 authorizes the Commission and the Office of Regulatory Staff to "initiate an independent study to evaluate the integration of renewable energy and emerging energy technologies into the electric grid for the public interest."[3] This study will "evaluate what is required for electrical utilities to integrate increased levels of renewable energy and emerging energy technologies while maintaining economic, reliable, and safe operation of the electricity grid in a manner consistent with the public interest."[4] The Commission recently established a rulemaking proceeding related to contracting for this independent study and other Act 62 provisions. The pending rulemaking will "provide a documented procedure including, but not limited to, accepting applications from prospective

[2] *Id.*
[3] S.C. Code 58-37-60.
[4] *Id.*

consultants and experts, public interviews, and final decisions made by Commissioners related to the pool of applicants."[5]

On May 30, 2019, the Commission opened this proceeding pursuant to Section 58-41-20 of Act 62, which directs the Commission to establish DEC, DEP, and other electric utilities' standard offer, avoided cost methodologies, form contract power purchase agreements, commitment to sell forms, and any other necessary terms or conditions. In implementing this requirement, the Commission "shall treat small power producers on a fair and equal footing with electrical utility-owned resources" by ensuring that rates accurately reflect avoided costs; that power purchase agreements and related terms and conditions are commercially reasonable and consistent with federal law; and that avoided energy, capacity, and ancillary services are fairly quantified.[6] The Commission is also required to consider in this proceeding whether to prohibit "the electrical utility reducing the price paid to the small power producer based on costs incurred by the electrical utility to respond to the intermittent nature of electrical generation by the small power producer."[7]

The passage of Act 62 represents the State of South Carolina's strengthened commitment to promoting renewable energy and consumer protection. In spite of this legislative mandate, Duke Energy has made proposals that taken together, will unquestionably discourage renewable energy growth in South Carolina, undermine PURPA and Act 62's stated commitment to promoting renewable energy, and ultimately harm ratepayers. Of particular concern are Duke Energy's proposed avoided capacity rates, which undervalue the capacity value of solar power producers by virtually

[5] Notice of Drafting, S.C. Public Service Commission Docket No. 2019-289-A (Sept. 4, 2019).
[6] S.C. Code 58-41-20(B).
[7] S.C. Code 58-41-20(E)(3)(b).

eliminating capacity payments in the summer; and Duke Energy's proposed SISC, which would assign costs (but not benefits) to solar power producers based on a study with various methodological errors that fails to accurately quantify the costs of integrating solar generation. Both of these proposals run afoul of the letter and legislative intent of Act 62 and PURPA. The Conservation Groups respectfully urge the Commission to reject Duke Energy's proposed avoided capacity rates and SISC.

II. Identification of witnesses that have pre-filed testimony

On August 14, 2019, DEC and DEP filed the direct testimony of George Brown, Steven Wheeler, Glen Snider, David Johnson, and Nick Wintermantel. On September 11, 2019, JDA filed the direct testimony of Rebecca Chilton; SACE and CCL filed the direct testimony of Brendan Kirby and James Wilson; SBA filed the direct testimony of Jon Downey, Hamilton Davis, Steven Levitas, and Edward Burgess; and ORS filed the direct testimony of Brian Horii and Robert Lawyer. On September 19, 2019, SACE and CCL filed the amended testimony of Brendan Kirby.

The Conservation Groups have pre-filed the expert testimony and report of Brendan Kirby, a licensed Professional Engineer with over forty-four years of electrical utility experience. Witness Kirby is a private consultant whose clients include the National Renewable Energy Laboratory (NREL), the Oak Ridge National Laboratory (ORNL), and the Hawaii Public Utilities Commission. Witness Kirby has authored numerous studies regarding renewable integration.

The Conservation Groups have also pre-filed the expert testimony and report of James Wilson, an economist with over thirty-five years of experience in the electric

power and natural gas industries. Witness Wilson has been actively engaged with resource adequacy issues in the PJM region for many years. Witness Wilson has also submitted affidavits and testified before the Federal Energy Regulatory Commission and various state regulatory bodies regarding resource adequacy issues.

III. Legal issues presented

SACE and CCL have identified multiple legal issues in the Companies' filings, as described below. SACE and CCL reserve the right to respond to issues not identified below but raised by other parties in the second briefing due to the Commission by Oct. 8.

First, taken together, Duke Energy's proposals will dramatically and unlawfully reduce avoided cost rates in direct contravention of PURPA and Act 62. "Section 210 of PURPA was designed to encourage the development of cogeneration and small power production facilities."[8] PURPA further "increase[s] competition in the production of electricity and reliance on renewable energy."[9] Act 62 expressly mandates consistency with PURPA and requires that any decision by this Commission be nondiscriminatory towards small power producers.[10] If the avoided cost rates approved by the Commission in this docket are set artificially low, renewable energy producers (or qualifying facilities, "QFs") will be unable to obtain financing.[11] As numerous industry representatives have

[8] *American Paper Inst. V. Am. Elec. Power Serv. Corp.*, 461 US 402, 405 (1983).
[9] *See, e.g., In re Ownership of Renewable Energy Certificates*, 389 N.J. Super. 481, 486, 913 A.2d 825, 828 (N.J. Super. Ct. App. Div. 2007); *see Kamine/Besicorp Allegany L.P. v. Rochester Gas & Elec. Corp.*, 908 F. Supp. 1180, 1192 (W.D.N.Y. 1995) (recognizing "the ultimate effect of PURPA is to introduce new energy producers into the marketplace" and affirming the Federal Energy Regulatory Commission's view that PURPA "tends to broaden the energy market as a whole" and that if "traditional utilities were successful in excluding [qualifying facilities ("QFs")], then, the long-range effect could be to reduce competition.") (internal citations omitted); *State ex rel. Sandel v. N.M. Pub. Util. Comm'n*, 980 P.2d 55, 58 (N.M. 1999) ("Congress introduced competition into the generation component of the electric power industry by enacting the Public Utility Regulatory Policies Act of 1978.").
[10] *See* S.C. Code § 58-41-20(A).
[11] *See* Direct Testimony of Hamilton Davis, Docket Nos. 2019-185-E and 2019-186-E at p. 16.

explained in pre-filed testimony, the combination of low avoided cost rates, short contract length terms, and uncertainty associated with a variable integration charge would artificially devalue QFs' energy and capacity contributions and result in inaccurate, low avoided costs that would seriously impede QF development in South Carolina.[12] These proposals are anticompetitive and discriminatory towards small power producers in violation of Act 62 and PURPA.

Second, Duke's Energy's proposed SISC runs afoul of the Act 62's requirement that the Commission, "address all renewable energy issues in a fair and balanced manner, considering the costs ***and benefits*** to all customers of all programs and tariffs that relate to renewable energy and energy storage." S.C. Code Ann. § 48-51-05 (emphasis added). The DEC and DEP Ancillary Service Study ("Ancillary Service Study") conducted by Astrapé Consulting on behalf of Duke Energy fails to consider any of the benefits of distributed solar generation, and instead calculates a SISC based exclusively on overinflated costs associated with the intermittent nature of solar generation. The Ancillary Service Study also failed to consider how the deployment of innovative technology, such as energy storage, could mitigate any costs associated with integrating solar QFs. Duke Energy's failure to consider "the costs *and* benefits" associated with renewable generation directly contradicts the legislature's language and intent.

Third, the proposed SISC is premature. Act 62 explicitly authorizes the Commission and Office of Regulatory Staff to "initiate an independent study to evaluate the integration of renewable energy and emerging energy technologies into the electric

[12] *See* Direct Testimony of Steven Levitas, Docket Nos. 2019-185-E and 2019-186-E at pp. 12-13; Direct Testimony of Rebecca Chilton, Docket Nos. 2019-185-E and 2019-186-E at pp. 8, 10.

grid for the public interest."[13] Instead, the Companies propose to impose a SISC upon solar power producers based on a study that is not independent, does not evaluate the costs and benefits of solar generation, and as discussed below, contains myriad methodological flaws. Given Act 62's authorization of an independent, holistic integration study, it would be inappropriate and premature to adopt an integration charge at this time.

Fourth, the Companies' proposal to impose an SISC is based on the Ancillary Service Study, which contains numerous methodological flaws and fails to reflect historical reality. As discussed in the expert testimony and report of Brendan Kirby, filed on behalf of the Conservation Groups, the Ancillary Service Study includes errors that lead it to (1) overstate the amount of load following reserves required to integrate solar generation, and (2) overstate the cost of maintaining any necessary reserves. The Ancillary Service Study predicts an unnecessarily high level of reserves because it uses a reliability metric that bears no relationship to the Companies' actual real time operational requirements; overstates solar volatility and fails to include known diversity benefits of distributed solar. The Ancillary Service Study overstates the cost of maintaining any necessary reserve by calculating the SISC based on the cost of adding reserves around the clock, even when solar is not operating, and basing the SISC on the cost of adding exclusively spinning reserves, when cheaper non-spinning reserves are more appropriate. Together, these errors lead to an inflated SISC that if approved would impose onerous costs of solar QFs that bear no rational relationship to any costs associated with integrating solar generation. Furthermore, as noted in Witness Kirby's testimony, the

[13] S.C. Code Ann. § 58-37-60(A).

Ancillary Service Study, which relies on a methodology to calculate the cost of solar integration that has never been approved in any jurisdiction, has not been subject to a technical review committee ("TRC"), stakeholder review process, or outside independent analysis.

Finally, the Companies' capacity value proposals rely on fundamentally flawed studies and lack substantial evidentiary support. The Companies' proposal to virtually eliminate solar QFs' capacity contributions by shifting seasonal capacity allocation to 100% winter, 0% summer in DEP and 90% winter, 0% summer in DEC is based on the DEC and DEP Solar Capacity Value Study by Astrapé Consulting ("Solar Capacity Value Study"), which contains numerous unreasonable assumptions regarding the relationship between temperature and load at extremely cold temperatures. The expert testimony and report of James Wilson, filed on behalf of the Conservation Groups in these dockets, detailed these errors and explained that taken together, the errors overstate the winter peak and unreasonably undervalue solar QFs capacity value. For example, Witness Wilson's expert report demonstrated that the Companies' assumption that there is a linear relationship between load and temperature at extremely cold temperatures is belied by historical data which indicates that at extremely cold temperatures customers have already turned on all of their heating resources, and many public facilities—such as schools and government buildings—close, reducing load.[14] Witness Wilson's expert report highlighted several additional flaws in the Solar Capacity Value Study' methodology including: the assumption that demands response would continue to be summer-focused despite the Companies' identification of greater resource adequacy risk

[14] Direct Testimony of James Wilson, Docket Nos. 2019-185-E and 2019-186-E at pp. 6-12.

in the winter; exaggerated load forecast error; and unreasonable assumptions regarding operating reserves during brief load spikes on cold winter mornings.[15] Taken together, these errors exaggerate winter resource adequacy risk and inaccurately devalue solar QFs' capacity contributions.

IV. Brief summaries of pre-filed testimony

A. Duke Energy

Duke Energy Witness Glen Snider's pre-filed direct testimony discussed the Companies' proposed methodology for calculating avoided capacity and avoided energy costs and how these methodologies comply with PURPA and Act 62.[16] Witness Snider's testimony also discussed the Companies' proposed solar integration services charge ("SISC"). Witness Snider explained that the Companies are proposing a $1.10/MWh SISC for DEC and $2.39/MWh SISC for DEP.[17] Witness Snider also explained that for both DEC and DEP seasonal capacity allocation "is now heavily weighted to winter based on the impact of summer versus winter loss of load risk, which has been driven by the volatility in winter peak demand, as well as the growing penetration of solar resources and its associated impact on summer versus winter reserves."[18] Witness Snider explained that based on the Solar Capacity Value Study conducted by Astrapé Consulting, 100% of DEP's loss of load and 90% of DEC's loss of load occurs in winter, and therefore DEP's proposed rates allocate seasonal capacity value 100% to winter, and DEP's proposed rates allocate seasonal capacity 90% to winter.[19]

[15] *Id.* pp. 14-20.
[16] Direct Testimony of Glen Snider, Docket Nos. 2019-185-E and 2019-186-E, pp. 30-41.
[17] *Id.* at p. 36.
[18] *Id.* at p. 19.
[19] *Id.*

Duke Energy Witness Nick Wintermantel's pre-filed direct testimony introduced the Companies' Solar Ancillary Service Study, which the Companies rely on for the proposed SISC. Witness Wintermantel explained that the Ancillary Service Study relied on SERVM, a model traditionally used in resource adequacy studies, in order to assess the DEC and DEP systems' "flexibility", as measured by Astrapé's new $LOLE_{FLEX}$ reliability metric, as additional solar generation is added to the system.[20] Witness Wintermantel explained how the Ancillary Service Study attempted to quantify the cost to the Companies of maintaining the same level of flexibility as solar generation increases.[21]

B. SACE and CCL

SACE and CCL Witness James Wilson's direct testimony and expert report critiqued Duke Energy's propose Schedule PP avoided capacity credits and seasonal and hourly structures.[22] Witness Wilson's analysis demonstrated that DEP's proposed 100% winter 0% summer capacity payment allocation and DEC's proposed 90% winter 10% allocation significantly undervalues the capacity contributions of solar QFs.[23] Witness Wilson's direct testimony and report explained that the Companies' proposed seasonal capacity allocation were based on flawed assumptions contained in DEC and DEP's Solar Capacity Value Study and 2016 resource adequacy studies. Witness Wilson's testimony also discussed the North Carolina Utilities Commission's ("NCUC") recent Order Accepting Integrated Resource Plans and REPS Compliance Plans, Scheduling Oral Argument, and Requiring Additional Analyses, Docket No. E-100 Sub 157 ("2018 NC

[20] Direct Testimony of Nick Wintermantel, Docket Nos. 2019-185-E and 2019-186-E, at p. 9.
[21] *Id.*
[22] Direct Testimony of James Wilson, Docket Nos. 2019-185-E and 2019-186-E.
[23] *Id.* at pp. 4-8.

IRP Order"), which declined to accept the loaf forecast and reserve margin assumptions and models also employed by the Companies' in this proceeding. Witness Wilson recommended that the Companies' avoided capacity rates be rejected and more balanced seasonal weightings be developed and approved.[24]

SACE and CCL Witness Brendan Kirby's pre-filed direct testimony and expert report reviewed and evaluated Duke Energy's proposed Solar Integration Services Charge. Witness Kirby explained that the Ancillary Service Study contained multiple serious flaws, including: (1) reliance on a reliability metric that does not reflect the actual reliability standards the utility must meet in its day-to-day operations; (2) improper scaling of solar plants' intra-hour output variability; (3) the imposition of higher reserve requirements 8760 hours per year, not just to hours when solar generation might cause reserve shortfalls; and (4) the unreasonable requirement that all added reserves come from online, spinning generation rather than significantly lower cost non-spinning resources.[25] Witness Kirby concluded that each of these methodological errors led the Ancillary Service Study to calculate an unreasonable and excessive SISC that would impose costs on solar QFs that are not rationally related to any integration costs these QFs might actually impose upon the utilities' systems.[26] Witness Kirby also discussed how other jurisdictions have adapted to increased renewable penetration on the grid, and explained that contrary to the Ancillary Service Study's findings, the cost of renewable integration does not increase, and has in fact decreased as renewable penetration increases.[27] Moreover, Witness Kirby testified Duke Energy's historical operating

[24] *Id.* at p. 7.
[25] Direct Testimony of Brendan Kirby, Docket Nos. 2019-185-E and 2019-186-E, at pp. 4, 17-32.
[26] *Id.* at pp. 32-33.
[27] *Id.* at pp. 13-17.

reserve data illustrates that operating reserves have not been correlated with increased solar penetration—in other words, the Companies' assertion that increased solar capacity has increased operating reserves and therefore increased costs imposed upon customers, is not supported by historical data.[28] For all these reasons, Witness Kirby recommended that Duke Energy's proposed SISC be rejected.[29]

C. JDA

JDA Witness Rebecca Chilton's direct testimony reviewed and evaluated the commercial reasonableness of certain terms of the Companies' proposed PPAs as defined by PURPA and the Act 62.[30] Witness Chilton testified that both PURPA and Act 62 are intended to balance consumer interests, the need to diversify generation, and the promotion of renewable energy. Witness Chilton explained the importance of PPA contract lengths, both for allowing QFs to obtain financing, and for maximizing the value that QFs provide to the utility and to ratepayers. Witness Chilton critiqued Duke Energy's 2017 decision to stop offering PPAs in South Carolina for terms greater than five years and recommended that the Commission adopt a fifteen year minimum PPA contract length.

D. SBA

SBA Witness Jon Downey's direct testimony discussed the development perspective of renewable energy companies.[31] Witness Downey explained the steps for developing a utility scale solar project and the capital risks solar developers are required to take on in order to develop and construct solar facilities. Witness Downey also

[28] *Id.*at pp. 7-12.
[29] *Id.* at p. 33.
[30] Direct Testimony of Rebecca Chilton, Docket Nos. 2019-185-E and 2019-186-E, p. 4.
[31] Direct Testimony of Jon Downey, Docket Nos. 2019-185-E and 2019-186-E

discussed how solar developers' assumption of these cost risks shield ratepayers from the escalating project costs that accompany utility-owned generation resources.[32] Witness Downey further explained that properly implemented, PURPA and Act 62 give businesses like his an opportunity to compete and maximize benefits to costumers.

SBA Witness Hamilton Davis discussed the impact that Act 62 has on this proceeding. Witness Davis explained that the legislature's intent was to shift away from the "business as usual" regulatory approach, which primarily advantages the traditional utility business model, and towards an approach to regulatory oversight that prioritizes the expansion of renewable energy, consumer choice and protection, and increased competition from small power producers.[33] Witness Davis also responded to Duke Energy Witness Brown's characterization of declining avoided cost rates as creating a "$2.26 billion over-payment" by ratepayers. Witness Davis explained that while falling natural gas prices have driven down the avoided cost in recent years, natural gas prices are expected to rise at which point PPAs entered into while the avoided cost was low will create an "under-payment."[34] Ultimately, Witness Davis explained, FERC has recognized that "overestimations" and "underestimations" of avoided costs will balance out, leaving the ratepayer unharmed. Witness Davis also explained that utility-constructed generation exposes ratepayers to far greater risks, and pointed to the abandoned Lee and V.C. Summer nuclear units that left South Carolina ratepayers on the hook for billions of dollars.[35]

[32] *Id.*
[33] Direct Testimony of Hamilton Davis, Docket Nos. 2019-185-E and 2019-186-E
[34] *Id.* at
[35] *Id.* at

SBA Witness Steven Levitas' testimony responded to and commented on various aspects of the Companies' proposed Standard Offer PPA, Terms and Conditions, Notice of Commitment to Sell Form proposed Large QF PPA, and proposed SISC. Witness Levitas also expressed concern that Duke Energy's proposed SISC would preclude any further QF development in South Carolina because of the variable nature of the charge and the excessively high proposed SISC cap.[36]

SBA Witness Ed Burgess' direct testimony provides an analysis and critique of Duke Energy's proposed avoided energy cost rates, avoided capacity cost rates, and proposed SISC. First, Witness Burgess noted that Duke Energy, as a publicly traded company, has an obligation to maximize returns to its shareholders, which in the context of avoided cost rates creates an incentive to build and own its own sources generation and maintain or increase natural gas consumption in the region.[37] These incentivizes, Witness Burgess explained, mean Duke Energy is biased towards proposing artificially low avoided cost rates and imposing barriers to competitive generators. Witness Burgess testified that various aspects of Duke Energy's proposed Avoided Cost methodology are biased against solar QFs, and in the aggregate drive down rates. Witness Burgess also explained how cost overruns from non-QF resources, such as the abandoned VC Summer nuclear plants, are far more damaging to ratepayers than overruns from PURPA QFs, where the developer bears all the cost overrun risk. Witness Burgess critiqued the seasonal weighting allocation of capacity value derived from the Companies' Solar Capacity Value Study; the assumed capital cost of new peaker plants; and the timing of assumed

[36] *Id.* at
[37] Direct Testimony of Ed Burgess, Docket Nos. 2019-185-E and 2019-186-E, pp. 7-10.

capacity value from QFs.[38] Witness Burgess also commented on the proposed Solar Integration Service Charge, testifying that: (1) it is premature to impose the proposed SISC until the true costs of integration can be more accurately quantified through an independent analysis as contemplated by the EFA; (2) the Ancillary Service Study contains several fundamental flaws that exaggerate the projected cost of integration services; (3) there is little evidence that the magnitude of integration costs projected by the Ancillary Service Study will materialize anytime soon; (4) the proposal considers integration costs imposed by solar QFs but does not consider integration services that can be provided by QFs; and (5) the proposed SISC is unrelated to real-world costs and introduces unnecessary uncertainty that would stymie solar QF project development.[39]

E. ORS

ORS Witness Brian Horii's testimony evaluated and provided recommendations regarding various aspects of the Companies' proposed avoided cost and capacity rates, PPA terms, and the proposed Solar Integration Service Charge. Witness Horii recommended that Duke Energy make two changes to its avoided capacity cost calculations: (1) increase the Fixed Charge Rate for a CT; and (2) correct the allocation of capacity costs to seasons and time of days. Witness Horii recommended that the Commission adopt alternative, higher capacity rates which reflect the corrected seasonal and time of day capacity allocation factors.[40]

Witness Horii also commented on the Companies' proposed SISC, noting that the results of the Study may indicate higher solar integration costs than would be required if

[38] *Id.* at p. 45.
[39] *Id.* at pp. 69-93.
[40] Direct Testimony of Brian Horii, Docket Nos. 2019-185-E and 2019-186-E , at pp. 16-18.

the Companies tried to minimize integration costs.[41] For example, Witness Horii explained, requiring less of an operating reserve increase in hours where there is a lower risk of variability rather than increasing operating reserves uniformly across all hours, regardless of risk, could reduce costs of solar integration.[42] Witness Horii also stressed the importance of stakeholder involvement in the development and updating of proposed integration service charges. Specifically, Witness Horii stated that since "renewable integration costs are intended to be charged primarily to the solar community… the solar community should have a voice in the determination of the charges."[43]

V. Other Relevant Info

The Conservation Groups do not submit any additional relevant info at this time, but appreciate the opportunity to file this prehearing brief.

[41] *Id.* at 20.
[42] *Id.* at 21.
[43] *Id.* at 25.